[Tm-42°C] 42°C below the melting temperature of the probe, [Tm-20°C] 20°C below the melting temperature of the probe, and [Tm-3°C] 3°C below the melting temperature of the probe, wherein said probe comprises [a] an HIV-2 nucleic acid molecule, which hybridizes to HIV-2ROD genomic DNA under hybridization conditions selected from the group consisting of 42°C below the melting temperature of HIV-2ROD genomic DNA, 20°C below the melting temperature of HIV-2ROD genomic DNA, and 3°C below the melting temperature of HIV-2ROD genomic DNA; [and wherein said nucleic acid molecule is selected from the group consisting of

nucleic acid molecules that hybridize to a greater extent to the genomic RNA of HIV-2 than to the genomic RNA of HIV-1 BRU under hybridization conditions of Tm-42°C;

nucleic acid molecules that hybridize to a greater extent to the genomic DNA of HIV-2 than to the genomic DNA of HIV-1 BRU under hybridization conditions of Tm-42°C;

nucleic acid molecules that hybridize to a greater extent to the genomic RNA of HIV-2 than to the genomic RNA of HIV-1 BRU under hybridization conditions of Tm-20°;

nucleic acid molecules that hybridize to a greater extent to the genomic DNA of HIV-2 than to the genomic DNA of HIV-1 BRU under hybridization conditions of Tm-20°C;

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nucleic acid molecules that hybridize to a greater extent to the genomic RNA of HIV-2 than to the genomic RNA of HIV-1 BRU under hybridization conditions of Tm-3°C;

and nucleic acid molecules that hybridize to a greater extent to the genomic DNA of HIV-2 than to the genomic DNA of HIV-1 BRU under hybridization conditions of Tm-3°C;]

b) washing the resulting hybrid under conditions for hybridization; and

c) detecting said hybrid.

80. (Amended) A method of producing [a] an HIV-2 specific hybridization probe for HIV-2 retrovirus nucleic acid, said method comprising:

a) providing a recombinant cloning vector, wherein said vector comprises [a] an HIV-2 nucleic acid molecule, which hybridizes to HIV-2ROD genomic DNA under hybridization conditions selected from the group consisting of 42°C below the melting temperature of HIV-2ROD genomic DNA, 20°C below the melting temperature of HIV-2ROD genomic DNA, and 3°C below the melting temperature of HIV-2ROD genomic DNA; [and wherein said nucleic acid molecule is selected from the group consisting of

nucleic acid molecules that hybridize to a greater extent to the genomic RNA of HIV-2 than to the genomic RNA of HIV-1 BRU under hybridization conditions of Tm-42°C;

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nucleic acid molecules that hybridize to a greater extent to the genomic DNA of HIV-2 than to the genomic DNA of HIV-1 BRU under hybridization conditions of Tm-42°C;

nucleic acid molecules that hybridize to a greater extent to the genomic RNA of HIV-2 than to the genomic RNA of HIV-1 BRU under hybridization conditions of Tm-20°;

nucleic acid molecules that hybridize to a greater extent to the genomic DNA of HIV-2 than to the genomic DNA of HIV-1 BRU under hybridization conditions of Tm-20°C;

nucleic acid molecules that hybridize to a greater extent to the genomic RNA of HIV-2 than to the genomic RNA of HIV-1 BRU under hybridization conditions of Tm-3°C;

nucleic acid molecules that hybridize to a greater extent to the genomic DNA of HIV-2 than to the genomic DNA of HIV-1 BRU under hybridization conditions of Tm-3°C;

and nucleic acid molecules that hybridize to a greater extent to the cDNA of HIV-2 or a fragment thereof than to the genomic DNA of HIV-1 BRU under hybridization conditions of Tm-3°C;]

b) cloning said vector in a competent cellular host; and

c) recovering the DNA recombinants.

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